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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,614	10/29/2003	Yoshitaka Ito	1018.1190101	9629
28075	7590	04/19/2005	EXAMINER	
CROMPTON, SEAGER & TUFTE, LLC 1221 NICOLLET AVENUE SUITE 800 MINNEAPOLIS, MN 55403-2420			WALK, SAMUEL J	
			ART UNIT	PAPER NUMBER
			2632	

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/697,614

Applicant(s)

ITO ET AL.

Examiner

Samuel J Walk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chuang (US 6591672) in view of Admitted Prior Art.

In reference to Claim 1, Chuang discloses a condition sensor of a pneumatic tire of a vehicle wherein claimed measuring-transmitting portion met by condition sensor 10, see Col. 2 lns 50-55 and Col. 4 lns 59-61; claimed valve stem met by tire valve stem 19, see Col. 3 lns 54-56; claimed casing met by housing (unlabeled), see Col. 3 lns 46-50; claimed engagement portion met by elongated hole 53, see Col. 3 lns 55-63. Chuang discloses a specific tool is used to affix the sensor, see Col. 4 lns 39-40, but does not specifically disclose that a jig of an automatic mounting machine is used. However, Applicant has admitted that clamp-in valve systems, systems which are screwed

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in and secured with a nut, use an automatic mounting machine with a jig to install the system, see pg 1 lns 32-25 and pg 2 lns 1-7. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made that a jig of an automatic mounting machine would install the valve stem condition sensing system of Chuang because it would be more efficient, effective and accurate and allow human workers to devote time and energy to other tasks.

In reference to Claim 2, Chuang also shows that valve stem cavity 51 and elongated hole 53 are located along the center axis of the valve stem, see Figs. 3 and 5.

In reference to Claim 3, Examiner takes Official Notice that both the concept and advantages of providing an air hole in the casing is both known and expected in the art. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide an air hole in the casing so that the tire pressure could be adjusted at any time.

In reference to Claim 4, Chuang further discloses that arcuated shoulder 56 is provided to prevent rotation, see Col. 4 lns 43-47.

In reference to Claim 5, see above rejection in reference to Claims 1 and 3. In addition, Chuang shows that valve stem cavity 51 and elongated hole 53 are recessed, see Fig. 3.

In reference to Claim 7, see above rejection in reference to Claims 1, 2 and 5

In reference to Claims 8 and 9, see above rejection in reference to Claims 3 and 4, respectively.

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chuang in view of Admitted Prior Art and in further view of Gabelmann (US 5844131).

In reference to Claim 6, Chuang and the Admitted Prior Art disclose a tire valve stem condition sensor that is affixed to a tire. Chuang and the Admitted Prior Art do not disclose a projected engagement portion. However, Gabelmann teaches of a tire pressure sensor apparatus for a pneumatic tire of a vehicle wherein projection portion 46 of the housing (casing) is provided, see Col. 5 lns 10-19. Therefore, one having ordinary skill in the art at the time the invention was made would have incorporated the teachings of Gabelmann into the system of Chuang and Admitted Prior Art because a projected engagement portion would allow manufacturers and users the ability to choose the design which best meets their specific requirement and specs for their design. For example, a projected engagement means may provide easier access to the nut or faster tightening.

**Conclusion**

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Straub (US 6055855) discloses a tire pressure sensor wheel attachment apparatus. Tsunetomi (US 6160474) discloses a transmitter casing for a tire air pressure warning apparatus. Kato (US 6101870) discloses a tire air pressure-monitoring device using the wheel or a coil wound around the stem as the transmitter antenna. Saheki (US 6568259) discloses a transmitter for tire condition monitoring apparatus. Saheki (US 2004/0163456) discloses a transmitter mounting structure for tire condition monitoring apparatus.


**Correspondence**

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel J Walk whose telephone number is (571) 272-2960. The examiner can normally be reached on M-F: 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Wu can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
DANIEL WU  
SUPERVISORY PATENT EXAMINER

4/15/05